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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,855	08/29/2001	Kazuyoshi Namba	33082M100	5071

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EXAMINER

SPISICH, MARK

ART UNIT PAPER NUMBER

1744

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/940,855

Applicant(s)

NAMBA, KAZUYOSHI

Examiner

Mark Spisich

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1744

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-12, drawn to a substrate cleaning apparatus, classified in class 15, subclass 77.
 - II. Claims 13-20, drawn to a substrate cleaning apparatus, classified in class 134, subclass 6.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be practiced by another materially different apparatus such as one which did not have the interior space and porous material (required by claim 1), the different heights (claim 2) or the different material or structure (claim 7) and the apparatus as claimed in claim 4 could be used to practice a process which did not have the last three lines of claim 13.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Michael A. Makuch (by examiner Saeed T. Chaudhry) on 28 August 2003 a provisional election was made with the right to traverse

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to prosecute the invention of Group I, claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Notice of Informal Examiner's Amendment

"33" (page 5, line 4) has been changed to – 3 --.

Priority

5. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

6. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is no antecedent support for "the cleaning liquid" (claim 6, line 3) and "the internal space" (claim 6, line 4). Applicant should review the claims for any additional informalities.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claim 7 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Morikawa et al (USP 5,911,257).

9. Claim 2 is rejected under 35 U.S.C. 102(e) as being anticipated by Yeo (USP 6,543,079). The patent to Yeo discloses a substrate cleaning apparatus including a holder (2) for holding a substrate (W) as well as first (40) and second (60) scrub heads wherein the two scrubs heads are adapted to be used at different vertical heights (column 5, lines 13-22). "Via a liquid film..." (claim 2, lines 10-11) does not structurally define over the prior art.

10. Claims 4,5,7,8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugimoto et al (USP 5,647,083). The patent to Sugimoto discloses a substrate cleaning apparatus comprising a wafer (W) holder (102) as well as a plurality of scrub heads (1) and further wherein it is disclosed that the scrub heads that the brushes may be of different types with one having nylon bristles and another being a PVA sponge (see column 8, lines 44-58).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1,6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al (USP 5,647,083) in view of Choffat et al (USP 5,870,793). The

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patent to Sugimoto discloses, as described above, the basic concept of sequentially using scrub heads of different types and fails only to disclose the particular type of second scrub head (although the second head is disclosed as being a PVA sponge cleaner). The provision of a fluid supply through a wafer cleaning head is conventional and Choffat is cited to teach that a PVA sponge cleaning head (equivalent to the second head taught by Sugimoto) including an interior space (28) and a porous material (32) through which a fluid flows. It would have been obvious to one of ordinary skill to have modified the second head of Sugimoto as such as it is shown by the prior art to be a conventional scrub head of the PVA sponge type.

13. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yeo (USP 6,543,079) in view of Choffat et al (USP 5,870,793). The patent to Yeo discloses, as described above, the invention substantially as claimed with the exception of the particular structure of the second scrub head. It would have been obvious to one of ordinary skill to have modified the second head (60) of Yeo as taught by Choffat for much the same reasoning as provided above. In fact, there is no reason why both of the heads (40,60) of Yeo could not be modified to have the structure of Choffat as claim 2 does not require that they be different.

14. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al (USP 5,647,083). The patent to Sugimoto discloses the primary concept of the invention as embodied in claims 7 and 8 and further has a holder motor, head traveling mechanism (2) and a controller. All the structure required by claims 11 and 12 is present in the patent to Sugimoto. The differences in the mode of operation of

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the apparatus fails to define over the structure of Sugimoto. Further, one of ordinary skill would deem it obvious to, within the teaching of the prior art, modify or optimize the operation of the structure of the prior art.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Tanaka and Kim are pertinent to brushes spaces above the wafer and heads with a fluid supply and a porous material.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Spisich whose telephone number is (703) 308-1271. The examiner can normally be reached on M-Th (6-3:30), Alternate Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J Warden can be reached on (703) 308-2920. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Mark Spisich
Primary Examiner
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MS